

Application No. 09/888,264
Amendment dated February 10, 2006

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method for screening for compounds that affect mitochondrial uncoupling, comprising:

- a) contacting a mammalian cell or tissue sample in vitro with a candidate compound;
- b) analyzing the contacted mammalian cell or tissue sample for expression of a polypeptide having at least 95% amino acid sequence identity to the a polypeptide encoded by SEQ ID NO:1 or 2, wherein the polypeptide having at least 95% sequence identity has mitochondrial uncoupling activity; and

- c) analyzing mitochondrial membrane potential of the contacted mammalian cell or tissue sample,

wherein a change in mitochondrial membrane potential and a change in expression of the polypeptide having at least 95% sequence identity, as compared to a control cell not treated with the candidate compound indicates that the compound affects mitochondrial uncoupling.

2-27. (canceled)

28. (previously presented) The method of claim 1, wherein the mammalian cell or tissue sample is a human cell or tissue sample.

29-36. (canceled)

37. (currently amended) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing expression of the a polypeptide encoded by SEQ ID NO:2.

38. (previously presented) The method of claim 1, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

Application No. 09/888,264
Amendment dated February 10, 2006

39-40. (canceled)

41. (currently amended) A method for screening for compounds that affect mitochondrial uncoupling, comprising:

a) contacting a mammalian cell or tissue sample in vitro with a candidate compound;
and

b) analyzing the contacted mammalian cell or tissue sample for expression of a polypeptide having at least 95% sequence identity to a the polypeptide encoded by SEQ ID NO:1 or 2,

wherein a change in expression of the polypeptide as compared to a control cell not contacted with the candidate compound indicates that the compound affects mitochondrial uncoupling.

42-45. (canceled)

46. (previously presented) The method of claim 41, wherein the mammalian cell or tissue sample is a human cell or tissue sample.

47-74. (canceled)

75. (currently amended) The method of claim 41, wherein the analyzing of expression of the polypeptide comprises analyzing expression of the a-polypeptide encoded by SEQ ID NO:2.

76. (previously presented) The method of claim 41, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

Application No. 09/888,264
Amendment dated February 10, 2006

77. (previously presented) The method of claim 1, wherein the mammalian cell or tissue sample is a liver cell or tissue sample, white adipose cell or tissue sample, or skeletal muscle cell or tissue sample.

78. (previously presented) The method of claim 41, wherein the mammalian cell or tissue sample is a liver cell or tissue sample, white adipose cell or tissue sample, or skeletal muscle cell or tissue sample.